FINAL Minutes
Region II-III Reforestation Implementation Group (IG)
Meeting #1 – April 4, 2016

Teleconference: Anchorage, Fairbanks, Soldotna, Ketchikan

IG Member present:

Theo DeLaca	Rick Jandreau	Mark Stahl
Clare Doig	Kevin Meany	Wade Wahrenbrock
Jeremy Douse	Tom Paragi	Joe Young
Jim Durst	Jeff Selinger	
Marty Freeman	Paul Slenkamp	

IG Members unable to attend:

Joe Bovee	Patrick Kelly
Tim Kalke	Amy O'Connor

Public attendees

Glen Holt, UAF-Coop Ext.
Todd Nichols-ADF&G

Introduction. IG members introduced themselves. Freeman reviewed the agenda.

Background presentations and discussion.

Freeman and Durst provided background on the reforestation review process and purpose, Implementation Group organization, the Forest Resources and Practices Act (FRPA), the Board of Forestry and its "Green Book principles", existing reforestation standards, the scale of current operations, and the findings and recommendations of the Science & Technical Committee (S&TC). This material is available in the handouts listed at the end of the minutes, and the three PowerPoints used are on the Division of Forestry website reforestation page at: http://forestry.alaska.gov/forestpractices#reforestation . The PowerPoints used are

- Implementation Group introduction and overview
- Review of existing reforestation standards
- Scale of harvesting.

General goals. Selinger asked whether the emphasis is on getting back the same tree species. The forest type can affect wildlife habitat. Douse, Doig, Stahl, Paragi, and Freeman responded with several points regarding species for reforestation:

- Mixed forests commonly regrow following harvests in spruce forests.
- The state often plants some spruce where spruce was harvested to encourage continuation of a spruce component in those stands.
- All commercial species are allowed by FRPA – it does not specify specific species.
- The goals want to ensure that a forest comes back, not a grassland.

Reforestation and wildlife.

- Freeman: The FRPA standards for wildlife vary by landowner. For public land, the standards include making allowance for important wildlife habitat, which is addressed primarily through land use and forest planning processes. For private land, the FRPA goals only address fish habitat, water quality, and reforestation.
- Durst and Paragi: FRPA recognizes wildlife habitat as a valuable forest resource and AS 41.17.910 directs ADF&G to work cooperatively with private forest owners to protect, maintain, and enhance wildlife. The ADF&G Habitat and Wildlife Conservation divisions provide advisory comments for wildlife habitat management when reviewing DPOs and landowners often contribute voluntarily to wildlife management.
- Paragi: The Division of Wildlife Conservation is developing overall guidelines for wildlife habitat management in areas managed for timber and woody biomass.
- Durst: The Tanana Valley State Forest also has a statutory objective to manage wildlife for human use.

Plantings of non-native species.

- Freeman: The S&TC recommends allowing planting of non-invasive non-native species. Within the forest stewardship program, the DOF policy has been to allow cost-sharing for planting up to 50% non-natives on private lands.
- Young: Many species were planted in the Tok Experimental Forest following wildfire.
- Paragi: Non-native species may be more susceptible to herbivory than native species.
- Freeman and Paragi: John Alden has documented many plantings of non-native species around Regions II and III. [Note: Alden's PowerPoint presentation to the S&TC on non-natives is on the DOF website at: http://forestry.alaska.gov/Assets/uploads/DNRPublic/forestry/pdfs/forestpractices/2014_11_25_Alden_Use_of_Non_Native_Trees_in_AK.pdf]

Phytosanitary certificates for imported equipment. Doig: Equipment brought into Alaska from Canada already requires a phytosanitary certificate documenting that the equipment was washed and inspected.

Definition of "merchantable" species.

- Freeman: Willow and other species can be merchantable if they have a commercial use such as biomass fuel.
- Paragi: Balsam poplar is cut commercially in some places (Fort Yukon as biomass fuel). TCC noted that Anvik has large willows on Yukon River islands possibly suitable for fuel biomass.

Land use conversions and habitat management.

- Freeman – if landowners want to replace forest with other cover to enhance wildlife habitat, the request can be submitted in a DPO and considered for either a variation or land use conversion. The forest owner has to demonstrate that it is a legitimate conversion, not an effort to sidestep reforestation requirements.

- Holt: Ahtna is doing partial stand conversions to manage more intensively for moose, berries, and other subsistence resources. Paragi: ADF&G has consulted with Ahtna on this project.

Requirements for seedlings available at a fair price.

- DeLaca: It is harder to purchase small orders of seedlings. Big nurseries want orders of at least 50,000 seedlings.
- Douse: Seedlings from PRT [Growing Services Ltd.] are less expensive than local seedlings and good quality. A local seedling source would be positive if it were economically competitive. Tanana Chiefs hasn't had trouble getting seedling orders filled yet; they often coordinate orders with the State. Small orders could be a problem.

Does 11 AAC 375 (c)(4) require an overall reforestation plan? Young: The DPO covers the required information

Land use conversions under 11 AAC 95.200.

- Freeman: Allowing an extended period for natural regeneration **C5am** would not extend the period allowed for a land use conversion. The landowner still has to do a survey in 5 years and show that the land is on track to meet the regeneration requirements. If a landowner has notified in a DPO that the land will be converted, the 5-year period to demonstrate that conversion is complete or in progress is unchanged.
- Freeman: A landowner can change the target of a land use conversion within the 5-year period, but that would not extend the period allowed for conversion.

Discussion of S&TC recommendations.

The Implementation Group began review of the S&TC recommendations, working from the chart that includes the text of the statutes and regulations beside the S&TC findings and recommendations.

F14. Indicators for natural regeneration.

- In respect to the recommendation to minimize soil disturbance where aspen suckering is desired. Doig noted that the Division of Forestry is experimenting with methods to encourage aspen regrowth from suckering in Tok. Holt said that the Tok work is on frozen ground when the hope is that chopping fire-killed trees will have limited root damage. Paragi added that the Tok roller-chopping is experimental, applied primarily to create stand age diversity in a large post-fire cohort. Other research has shown that increasing soil temperature does increase sprouting, while chopping rhizomes may decrease aspen sprouting. Freeman will check with DOF Tok Area Forester Jeff Hermanns for more information.

F16, F19, and Natural Regeneration on Kodiak. Doig: Getting prompt reforestation on Kodiak-Afognak is important because it is too expensive to replant if problems develop. [Note: Landowners are responsible for reforestation costs, including replanting if necessary.]

F17, F14 Site preparation, reforestation indicators, and wildlife habitat:

- Paragi: Research is needed on the role of voles in fungal inoculation of forest soils. Maintaining small mammal populations can help with inoculation.
- Paragi: Keeping a mix of young growth and old growth features is beneficial. Even lynx den in brush piles.
- Young: Landowners should do a site prescription before harvesting to identify new growth, seed trees and ensure that a site has scarification, new growth, and seed trees before leaving the site. Some debris should be left for habitat, and willow can be crushed to encourage reproduction.
- Paragi: Planting is more successful if done during periods when herbivore populations are low. TCC noted that shrubs create hare cover that can increase browsing on planted conifers (near Nenana). Grass cover is the biggest concern for seedling competition and *Microtus* vole abundance (girdling risk).
- Jandreau: If herbivore populations are high, they may decline within the 5-12 year reforestation period. Could you still allow an extended period for natural regeneration when herbivore populations are high?
- Holt: Moose were the biggest problem for natural regeneration of birch and other hardwoods when he worked in the Mat-Su area.

C22: Conversion of board-foot thresholds to other measures.

- The IG agreed that the board-foot thresholds should be translated into cubic foot/cunit, cord, and tonnage measurements. 1 cord = 85 cubic feet of solid wood.
- Wahrenbrock: On the Kenai, the figure 7.2 green tons/MBF of spruce or about 5 dry tons/MBF of spruce have been used for timber harvests for pulp. Jim Peterson from DOF researched conversion factors for chip weight.
- Doig and Meany will research conversion factors to convert volume to tonnage with consideration for species and dry vs. green weight.

C1am: DPO information requirements for natural regeneration.

- Jandreau: Some operators will have problems identifying the seven indicators – they will need training.
- Doig: A checklist of the indicators should be provided in the DPO form. In the purple book, clarify whether all 7 indicators have to be positive to allow an extended period for natural regeneration.
- Wahrenbrock: Guidance on the level of detail is needed – do owners have to do a survey on the amount of grass present prior to harvest?

C5am: Extending the deadline for natural regeneration in areas where the indicators predict a high likelihood of success

- DeLaca: Delays in regeneration can cause problems. It is good to have an option for natural regeneration, but if planting is needed it should occur promptly. In recent years, we've been fighting grass problems. Some Kenai sites had to be planted three times. If planting is done immediately it can be successful.
- Young: If a stand hasn't met the regeneration standards after 5 years, why would it meet the standards over a longer period? Durst: The Morimoto study of actual state timber harvests near Fairbanks over a 40-year period showed that many stands that didn't fully meet the reforestation standard at the time of the regeneration survey (5-7 years) did meet the standard when they were re-examined several years later (findings that influenced C5am by S&TC). Tree recruitment can continue if seedbeds remain available. Freeman: If the 5-year report shows that the site is not on track to meet the standards, remediation can be required, e.g., partial scarification, spot planting, etc.

<u>Stocking density (11 AAC 95.375(b)(4) and (d)(2) and (3):</u>

- Young: 680 trees per acre is a better standard that 450 trees/acre based on Canadian literature and 1.5% annual mortality of seedlings.
- Stahl: 450 trees/acre is too high – it is a disincentive for planting.
- Freeman: Landowners can use a mix of planted trees and natural regeneration. For example, DOF sometimes plants about 200 spruce seedlings/acre to complement the natural hardwood regeneration and keep a spruce component in the stand.
- Doig: The standards need to recognize reforestation costs.
- Stahl: It costs $.40 per tree to plant a seedling.
- Meany: Total costs to DOF are about $1 per planted seedling.
- Jandreau: Scarification in Region II costs about $75-125/acre.
- Paragi: Higher seedling densities could be beneficial where landowners want to maximize sawtimber or fiber production.
- Meany and Douse: Planting costs are prohibitive – land managers lose money on planting. Don't raise the minimum stocking density standard. Landowners can always plant more seedlings if they choose to do so.
- Young: Cost differential can also be affected by stand history (e.g., salvage or green tree) and available markets.
- Paragi: Morimoto found some stands were overstocked due to a combination of planting and natural regeneration.
- Meany: There aren't sufficient growth and yield models to predict the yield of mature stands that developed from varying seedling densities.
- Paragi: There are some stand projections, but it partly comes back to what landowners want to provide in the long-term. FRPA doesn't force landowners to choose a particular production target. Habitat values are also important to many landowners.
- Selinger: Should seedling density vary between hardwood and conifer stands? On the Kenai Peninsual, 450 seedlings is insufficient to get full stocking for birch and aspen.
- Wahrenbrock: You need enough hardwood seedlings to be able to escape browsing.
- Freeman: The Regulations specify that qualifying seedlings be vigorous, undamaged, and well distributed.

- Meany: 450 trees/acre at 7 years is a good minimum. Landowners can manage differently in specific cases.

The IG did not reach consensus on stocking density standards and will continue to discuss this issue. The particular conditions on the Kenai need further consideration.

S&TC C13am: Seed source.

- Wahrenbrock: John Alden did a research planting on the Kenai Peninsula including 39 tree families. Some of the seeds that are doing best are from the Delta area. Successful seeds might not only come from areas south of the planting site.
- Doig: Could Sitka spruce be planted successfully on the western Kenai Peninsula?

DRAFT IG CONSENSUS POINTS.

- **S&TC C3am** – No changes needed. The Implementation Group agreed with the S&TC recommendations that no changes are necessary to
    - the statutory reforestation standards in AS 41.17 including
        - The goals in AS 41.17.060 (b)(4) and (c)(4) and (c)(5)
        - Land use conversion provisions in AS 41.17.110
        - Definitions in AS 41.17.950 for "forest land" (7), "forest landowner" (8), and "sustained yield) (27)
    - the regulations in 11 AAC 95 including
        - Applicability thresholds in 11 AAC 95.190; however they agreed that conversion factors to translate the board-foot thresholds in the definitions for commercial operations into cunit and ton measurements for the implementation handbook are appropriate. *(see discussion above and **C22** below)*
        - Land use conversion provisions and definitions in 11 AAC 95.200. 11 AAC 95.375(b)(1), 11 AAC 95.900(13)
        - Clearing of spruce (11 AAC 95.195)
        - Harvest unit planning and design (11 AAC 95.340(b))
        - Material extraction and disposal sites (11 AAC 95.325(d)(1))
        - Stocking includes both seedlings and residual trees (.375(d)(3))
        - Extensions (.375(e))
        - Vegetative reproduction (.380(b))
        - Regeneration survey review (.385 (b))
        - Apply for reforestation exemption through DPO (.375(g-part))
        - Exemption allowance for dead and dying stands (.375(b)(2), (h))
        - Site preparation
        - Definitions in 11 AAC 95.900 for "commercial tree species" (11), "conversion" (13), "reforest" (63), "residual trees" (67), "sapling" (71), "seedling" (73), "surface waters" (84), "timber" (86),

- **S&TC C22** Applicability. The IG agrees that conversion factors should be provided for translating the thresholds for "commercial operation" and "commercial timber harvest" from board-foot measures to cunits, cords, and tons. Cunits can be converted to cords using a figure of 85 cubic feet/cord. Based on inventory information from the Division of Forestry on state land in Regions II and III, the 10 MBF/year threshold in Region II correlates to approximately 35 cunits (3.5 thousand cubic feet (MCF)), and the 30 MBF threshold in Region III correlates to approximately 80 cunits (8 MCF).

Draft conversion factors for applicability thresholds for commercial operations					
Region	**Board-foot measure**	**Cubic foot measure**	**Cunits**	**Cords**	**Tons**
II	10 MBF	3.5 MCF	35 cunits	41 cords	TBA
III	30 MBF	8.0 MCF	80 cunits	94 cords	TBA

- **S&TC C3am.** Clarify threshold for largest dbh class – it should be "9 inches or greater," otherwise the 9" diameter class is not covered.
- **S&TC C6am.** The IG concurs with the S&TC recommendation to allow flexibility to reflect natural variation in stocking distribution prior to harvest, similar to the provision for flexibility to reflect natural variation in stocking density prior to harvest in 11 AAC 95.375(c).
- **S&TC C8am.** The IG concurs with the S&TC recommendation to change the reforestation distribution requirement at 7 years from 90% to 80% (11 AAC 95.375(d)(4)).
- **S&TC C12.** The IG concurs with the S&TC recommendation to consider site conditions and non-stockable areas when reviewing requests for variation from the stocking standard under 11 AAC 95.375(c).
- **S&TC C23.** The IG concurs with the S&TC recommendation to clarify that 11 AAC 95.380(a) applies to regeneration from seed.
- **S&TC C1am.**The S&TC recommended that more in-depth information be provided in DPOs for operations that plan on natural regeneration, including information on the seven indicators for successful natural regeneration. This information would be required for an operator to qualify for an extended period for natural regeneration under **S&TC C5am**.

  The IG recommends:
  - Operators continue to be able to submit DPOs without having to wait for the snow-free conditions that would be necessary to address some of the natural regeneration indicators. However, an extension of the deadline for natural regeneration would depend on having information on the seven indicators in the DPO; if that information is not available, the current 7-year deadline for reforestation continues to apply.
  - Supplemental information on the seven indicators could be submitted through a change of operations if desired.
  - Check boxes for the indicators should be added to the DPO Supplemental Form C for reforestation planning. The form or the purple book should clarify what "high likelihood of success" means. DOF and ADF&G will develop a sample form
  - Training is needed on the natural regeneration indicators and to clarify if a survey is required for any indicators or simply a site visit.

S&TC C5am. The IG recognizes that not all sites are appropriate for an extended reforestation period, but agrees with the concept of an extended period for natural regeneration on sites where there is a high likelihood of successful regeneration.

The IG recommends that the agencies also consider other actions proposed (e.g., site preparation, harvest unit design) to mitigate concerns in determining whether to extend the regeneration period.

S&TC C13am. The IG concurs with the S&TC recommendation to expand options for artificial regeneration to respond to climate change with the following addition to option 2):

> **"**2) Using seed/seedlings of native species from similar conditions in a mix with seed/seedlings from up to 10 degrees latitude south of the planting site *(Robertson, 2012).* Seeds from farther south or other location may be used if they have been demonstrated to be successful."

This change recognizes that some seed sources may prove successful that are not solely from areas farther south, e.g., seeds from interior areas with warmer growing seasons may become suitable for areas in southcentral.

Handouts

- Agenda
- Contact list
- Implementation Group organization
- Existing reforestation standards
- Bibliography section summaries
- Science & Technical Committee recommendations

TO DO LIST

Marty, Kevin, Rick, Jim, Tom: Develop a DPO Supplemental Reforestation Form using the indicators for natural regeneration success

Clare and Kevin: draft recommendations for conversion factors from cunits to tons

Jim and Marty:

- Draft minutes and distribute to Implementation Group for review *(done)*
- Review information on phytosanitary certificates and seedling imports from Lower 48
- Review effect of root disturbance on aspen suckering in Tok trials

Jim:

- Compile reference chart of S&TC findings, recommendations, and research needs by number *(done)*

Marty:

- Send to IG – Stand stocking summary from inventories and link to DOF Reforestation Handbook (done)
- Check on use of “sapling” in regulations *(done)*
- Check on whether Reforestation Handbook defines nonstockable areas *(done)*
- Contact Lori Winton about root rot presentation *(done-scheduled for 1:00 during the April 25 meeting)*
- Check with Yarie and Juday about stand projections from varying seedling densities